Compressed Liquid Densities of Propane– N,N-Dimethylformamide and Thiophene - Propane– N,N-Dimethylformamide (DMF) Mixtures via a Vibrating Tube Densimeter from 313 to 363 K and 21 MPa

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This work is a continuation of a systematic study to find a good solvent in order to extract sulfur compounds from cuts of Mexican crude oil in the refining industry. Liquid densities were determined for propane– N,N-dimethylformamide and thiophene - propane – N,N-dimethylformamide (DMF) mixtures from 313 to 363 K and up to 21 MPa with an uncertainty better than $\pm$ 0.05 %.

PvT properties in liquid phase carbon dioxide– N,N-dimethylformamide and thiophene - carbon dioxide (CO_2) – N,N-dimethylformamide (DMF) mixtures reported in this work are correlated with the Starling and Han equation of state (BWRS EoS) using a least square optimization, with a relative deviation lower than $\pm$ 0.7 % for both systems.